

25

| | | | |
|-------------------------------|------------------------|---------------------|--|
| Notice of Allowability | Application No. | Applicant(s) | |
| | 10/605,313 | KUANG ET AL. | |
| | Examiner | Art Unit | |
| | Bryan Fischmann | 3618 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to filing of 09-22-2003.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☒ The drawings filed on 22 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date <u>9-22-03</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

 8-4-5
BRYAN FISCHMANN
PRIMARY EXAMINER

Examiner's Amendment

1. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Don Harrington on 08-03-2005.

2. The application has been amended as follows:

A. IN THE CLAIMS

1) Claim 5 has been amended as follows:

a) On line 3, the word [[the]] that appears before the word "maximum" has been deleted and replaced with the word --a--.

b) On line 4, the word [[the]] that appears before the word "minimum" has been deleted and replaced with the word --a--.

Reasons for Allowance

3. The following is an Examiner's statement of reasons for allowance of independent claims 1 and 8:

Claim 1 recites the limitation of a method for controlling a hybrid electric vehicle powertrain having an internal combustion engine, a battery, an electric generator, an electric motor and a geared transmission, the method comprising the steps of; determining desired input torque, vehicle speed and the state-of-charge of the battery,

determining whether the state-of-charge is less than a predetermined high value above which charging of the battery is not allowable, determining whether the state-of-charge is greater than a predetermined target value, operating the powertrain in a positive split mode when the state-of-charge is less than the high value and greater than the target value, and operating the powertrain in a generator drive mode with the engine off when the state-of-charge is greater than the high value. This limitation, in combination with the other limitations of claim 1, were not found in the prior art.

Claim 8 recites the limitation of powertrain control system for a hybrid electric vehicle comprising an internal combustion engine, a battery, an electric generator, an electric motor and planetary gearing, a first brake for preventing rotation of the generator to condition the powertrain for a parallel operating mode, a second brake for preventing rotation of the planetary carrier to condition the powertrain for operation in a generator drive mode, and a vehicle powertrain controller for detecting the state-of-charge of the battery and the vehicle speed, the controller setting the operating mode when the state-of-charge is greater than a target value and the vehicle speed is less than a maximum value, the controller setting the powertrain for operation in generator drive mode when the state-of-charge is greater than a predetermined high value and the vehicle speed is less than the maximum value. This limitation, in combination with the other limitations of claim 8, were not found in the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 3618

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan Fischmann whose telephone number is (571) 272-6694.


BRYAN FISCHMANN
PRIMARY EXAMINER